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(54) **RADAR SYSTEMS AND METHODS USING ENTANGLED QUANTUM PARTICLES**(75) Inventors: **Edward H. Allen**, Lancaster, CA (US); **Markos Karageorgis**, Palmdale, CA (US)(73) Assignee: **Lockheed Martin Corporation**, Bethesda, MD (US)

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342/118(58) **Field of Classification Search** ..... 356/28,  
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See application file for complete search history.

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## ABSTRACT

An entangled quantum particle generator generates a signal including a plurality of entangled particles. The wavelength of the signal is the sum of the wavelengths of the entangled particles. A signal processor determines a characteristic of the target based on information derived from at least some of the entangled particles in the return signal. The frequency of the signal is selected to propagate the signal through a medium and the frequencies of the entangled particles are selected to provide sufficient data in the return signal to resolve the characteristic of the target.

27 Claims, 5 Drawing Sheets

